POWERSOURCE

SUMMER 2017 » CONSTRUCTION SERVICES » SOLAR ECLIPSE » WATIES ISLAND » VOLVO PLANT

from the CEO

Santee Cooper recently received notable awards from the American Public Power Association. Along with sweeping 1st and 2nd places at the national Lineworkers Rodeo, we earned the Reliable Public Power Provider (RP^3) Diamond Level designation and the Safety Award of Excellence for safe operating practices in 2016.

The RP^3 Award recognizes our employees' efforts in making sure our customers have reliable power, and I applaud them for their commitment and determination. Through regular maintenance, building redundancies in our system and some good old fashioned elbow grease, we work hard to make sure your electricity is available when you need it.

Generating and delivering electricity and water is hazardous work. Safety is a core value at Santee Cooper, and I firmly believe we cannot give it too much attention.

That's why I'm proud that our employees achieved the APPA Safety Award of Excellence. I'm also proud that in 2016, Santee Cooper recorded just 29 safety incidents, the fewest of any year since we began keeping records. With our workforce of 1,759 employees, that's quite an impressive accomplishment.

The most important goal for me is that all of our employees go home to their families each night. We cannot be too careful, especially when our "office" is a bucket truck several stories in the air. Getting to this point has taken teamwork and an unprecedented effort to look out not just for ourselves, but for each other. And so to each employee at Santee Cooper I say "thank you" for your vigilance, congratulations on your success, and keep continuing to make safety a top priority.

I'd also like to congratulate our two Journeyman teams who represented us at the national rodeo. More than coming in first and second, these two teams did not lose any points during the competition because of safety practices. In short, it shows they walk the walk when it comes to safety, even when the competition is stiff.

Lonnie N. Carter
President and Chief Executive Officer

Editor
Nicole A. Aiello

Art Direction and Design
Jennifer Dease

Photography/ Photo Editor
Paul Zoeller

Writers
Nicole A. Aiello
Mollie Gore
Susan Mungo
Willard Strong

PowerSource is published by Santee Cooper Corporate Communications. It is printed and distributed by Santee Cooper Corporate Print and Mail.

Address all correspondence to:
Corporate Communications
Santee Cooper
1 Riverwood Drive
Moncks Corner, SC 29461-2901

email: nicole.aiello@santeecooper.com

phone: 843-761-7030

SOUTH CAROLINA NOTABLE STATE DOCUMENTS AWARD

VOL. 17 // NO. 3 // SUMMER 2017

CONTENTS

Features

About the Cover

Photo by Paul Zoeller

Santee Cooper's environmental efforts include reclaiming fly ash in permitted ash ponds for beneficial use in the concrete and cement industry. Employees with our construction services department use excavators and other heavy equipment to remove ash at the former Grainger Generating Station site in Conway.

santee cooper®

BY NICOLE A. AIELLO

PHOTOGRAPHY BY PAUL ZOELLER

Jake Owens, equipment operator II, guides Joseph Gadson, construction crew supervisor, as he guides an excavator onto a trailer along the west dike on Lake Moultrie in preparation to ship the large equipment to Conway.

ROCK SOLID

THE MANY FACETS OF CONSTRUCTION SERVICES

ON CONSTRUCTING

on an unseasonably hot and hazy morning in mid-May, Edward Austin climbed into the cab of a construction-yellow backhoe and took control. With sweat beading his forehead under the brim of his hard hat, Austin maneuvered a load of large rocks with the backhoe's loader bucket. The sound of stone on stone grinded through the air as rocks tumbled from the loader, placed in precise locations in order to fortify the sides of a new road against erosion.

Austin, a Santee Cooper construction crew supervisor, and his team were working to complete a gravel road under a transmission line. This particular power line connects to Santee Cooper's Pringletown substation, which feeds electricity to Edisto Electric Cooperative and the new Volvo Cars USA campus.

You may not think twice about the importance of an unassuming gravel road with rocked sides, but it can be essential to business. It's part of the infrastructure imperative to making sure Santee Cooper supplies reliable electric service to its customers. Without clear rights of way or easy access, power lines could not be built and maintained quickly, and that would jeopardize reliability.

This is just one of the ways Santee Cooper's construction services department supports our mission to be the leading resource for improving the quality of life for all South Carolinians.

Santee Cooper's construction services group, led by Manager Mark Carter, is made up of employees who aren't the type to seek the spotlight. They are charged with everything from clearing land and pouring concrete slabs for substations to transporting ash, testing soil, and maintaining the dams and dikes around the Santee Cooper Lakes. More visible to community members, the construction services group recently built public bathroom facilities for the Amos L. Gourdine Boat Landing on Lake Moultrie. And each autumn, crews help brighten up the holiday season by assembling the lights displays for the annual Celebrate The Season festival in Moncks Corner.

In a recent staff meeting, Carter and six of the supervisors who report to him got down to business, reviewing the 301 projects on their to-do list. Their yearly responsibilities are no small feat. It takes time, planning and dedication to execute each project successfully. And they do it with an attitude toward excellent customer service.

"This is a great team, one that's able to manage that large number of projects. Each supervisor has several crew supervisors under them and teams that get the work done. I trust them to take those projects and assignments and run with them," said Carter, who also manages transportation services.

Along with building roads to substations, the construction services group builds foundations for those substations. Along U.S. Highway 544 in the Surfside Beach area, work has started on the new Azalea Lakes substation. It's an arduous process that begins with clearing the land, boring into the ground and testing the soil.

"This is one of our basic functions. This is what we do," said Todd Robertson, a construction services supervisor and a three-decade Santee Cooper employee. "As electric load increases, we have to be able to distribute power to those customers. And the Myrtle Beach area is one of our biggest markets. We need more substations to deliver that power, and the construction services group helps make that happen." As clearing for a substation begins, engineers test the soil to see if it can withstand a heavy structure.

If soil consistency is not up to par, crews "muck out" or remove the undesirable soil and bring in acceptable soil before starting construction on the concrete pad that will be the base of the substation.

Although Santee Cooper's electric and water customers don't get a chance to see them in action like they see line technicians, ultimately each employee in construction services is working for our customers.

"Our internal customers are the transmission and distribution departments, although we're ultimately working for Santee Cooper's customers, those who receive power from us. For the Azalea Lakes substation, the customers we're working for are primarily in the Myrtle Beach area," Robertson said. "We can turn out some work, now. Crews know how to work hard and they take pride in what they do."

Above: Edward Austin, crew supervisor, uses a backhoe to work on a road leading to the new substation serving Volvo.

Left: Equipment Operator III Eric Pressley directs Construction Services Crew Supervisor Joseph Gadson as he lowers the bucket during preparations to transport the equipment to Conway.

DECONSTRUCTING

It seems ironic, but construction services also does its fair share of deconstruction. At the site of the former Grainger Generating Station, located off of U.S. Highway 501 in Conway, crews are working to deconstruct Grainger's two ash ponds, removing and hauling the ash so it can be beneficially used in industrial products, like concrete.

Supervisor Jim Boodle explained the overall process.

"We started planning in 2013 and removing ash in 2014. We excavate the ash, dry it and run it across a screen to sift out unwanted material before loading it into trucks," he said.

Removing ash from ash ponds is taking place not only at the Grainger site, but also at Winyah and Jefferies generating stations. Grainger, however, has been the most visible because of its location and because the public had a particularly high interest when the station and its two 300-ft. stacks were demolished in 2016.

"Crews have early mornings, some beginning work as early as 6 a.m., five days a week. It can be difficult work. The screens are pretty high maintenance, needing many repairs. The screen decks and general maintenance can get pretty grueling at times," Boodle said. "But our guys take a lot of pride in what they do, and the crews spend so much time together, they end up becoming like family, particularly at the Grainger site. This is a long-term project. These guys have been out of town and away from their homes for the last couple of years. Others, like those who report to Winyah in Georgetown every morning, also have a bit of traveling they do every day."

Traveling is what Supervisor Mack Irick and his crews and drivers do best. They, too, understand getting to work early in the morning, and are responsible for making sure each project has the heavy equipment it needs to be successful.

"Our job is to be service-oriented to the needs of our customers," Irick said.

That service-mindedness is critical to make sure work stays on schedule. Work can't begin without the right equipment. Irick's crews also have the hefty responsibility of hauling the ash to its final destinations, a process that has recently been fast-tracked to push the targeted completion date of emptying Grainger ash ponds from 2020 to the end of 2018. Irick, with his no-nonsense sense of humor, said his crews take it all in stride. As Irick puts it, "You call. We haul."

Construction services crews operate wheel loaders and other heavy equipment to remove ash at the former Grainger Generating Station site in Conway. The ash will be utilized in the concrete and cement industry.

Below: Engineering Technician A Russell Bagwell (right), Engineer III Michael Melchers (center) and Engineering Technician C Shiloh Burbage (right) break up clumps of dirt before sampling the soil.

Right: A machine with mesh filters (top) is used to shake, sift and separate soil samples from dams and dikes. Cement samples are tested to determine strength (bottom).

MAINTAINING

Carter said dam and dike maintenance is probably one of the most important duties of the construction services group.

"Dam safety is a matter of public safety, and we all take that seriously," Carter said. "Our employees' expertise in dam maintenance and safety is par to none, and they work extremely hard, especially during emergencies."

For example, construction services' crews worked to make sure the dikes that separate Grainger's ash ponds from the Waccamaw River stayed intact during the flooding that took place in October 2015 and during the winds, rain and flooding Hurricane Matthew brought with it in October 2016.

Crews also keep dams and dikes around the Santee Cooper Lakes repaired and maintained.

John Steed and his crews help with that maintenance. "When you look west at the water, you realize the importance of the job you're doing," Steed said.

With more than 40 miles of dams and dikes to maintain, the construction services' engineering team has a great deal of ground to cover.

"We're on the tail end of a 15,000-square-foot watershed and we're in the Lowcountry. You have to go a long way to find higher elevations to tie into, so inspections are a significant part of what we do. Our engineering staff does regular inspections, looking for things like movement in the dams, sloughing, slumps, depressions or cracking," said Shea McMakin, supervisor of civil projects. "With all dams and dikes, water seeps through. Whether they are made of dirt or concrete, they are porous. The goal is to understand how much the water moves, where it is, where it goes and that it's not moving material around."

"We utilize instrumentation, like a piezometer and other flow-measurement devices. We read these instruments to make sure the water stays where it is supposed to be, and that the dam is stable," McMakin said.

Burbage (left) takes a reading on the Lake Moultrie dam as Bagwell logs the data.

Technicians review flow measurements on a monthly basis. If problems arise, engineers review those issues and request maintenance crews in construction services to remedy the issues.

Said McMakin, "It's important to mitigate any problems. We don't want a storm event or act of nature to come in and cause safety problems. For example, we do earthquake mitigation to provide a level of safety and security for the public."

Earthquakes are a real possibility in the Lowcountry, and so are hurricanes. During Hurricane Matthew, McMakin and his staff were inspecting and surveying dams and dikes by 9 a.m. on the day of the storm.

"We make sure we don't have issues or problems that could put the public at risk. That's what we're hired to do," McMakin said.

Transportation Services is the Santee Cooper group charged with supporting the constructors, deconstructors and maintainers. Fleet Manager Ricky Winter and his staff number more than 20-strong, and they maintain and repair fleet vehicles like cars, small trucks, bulldozers and other heavy equipment used across the utility, from generating stations to distribution and transmission crews – and Carter's own Construction Services team.

ALTHOUGH

they are a diverse group with a wide set of skills, construction services employees believe in customer service.

"We treat each project and each customer like we'd want to be treated, and we give good attention to each project. We work hard and let our folks work directly with the customers in order to meet and exceed their expectations," explained Carter.

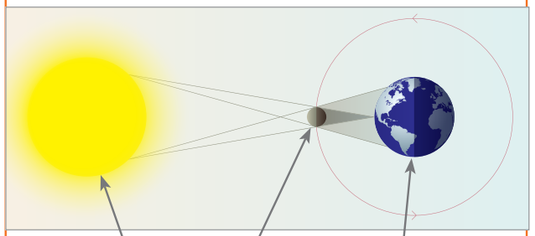
IN ANCIENT TIMES, PEOPLE HAD GRAND IDEAS ABOUT ECLIPSES. THEY WERE VIEWED AS EVERYTHING FROM GODS BEING UNPLEASED TO PREDICTORS OF MIRACLES TO DRAGONS EATING THE SUN. ECLIPSES WERE OMENS FOR GOOD OR EVIL AND BECAUSE THEY WERE MISUNDERSTOOD, THEY WERE EITHER REVERED OR FEARED.

Luckily, our ancestors got wise to the ways of the sun and the moon. The darkness of an eclipse is now an exciting scientific occurrence instead of an omen predicting the end of days. Forty-seven years after the last total solar eclipse occurred in our neck of the woods, Saturday, March 7, 1970, the countdown has begun and the clock is ticking toward the afternoon of Monday, Aug. 21, the day the sun will go dark again. For many people, this will be a first-time event. The exciting news is it will be easily accessible, especially in our fair state. The total eclipse of the sun is predicted to darken the skies from South Carolina all the way to Oregon.

The heart of totality will be seen from around the Santee Cooper Lakes, Marion and Moultrie. The five-county area of Berkeley, Calhoun, Clarendon, Orangeburg and Sumter are in the international solar spotlight. The lakes and their tourism community are buzzing with excitement.

“The anticipation has been building for more than a year now, and this is being viewed as one of the biggest tourism draws ever in the 75-year history of lakes Marion and Moultrie,” said Mary Shriner, executive director of the Santee Cooper Counties Promotion Commission. “There is no doubt about it; around the lakes will be one of the best places to experience the eclipse.”

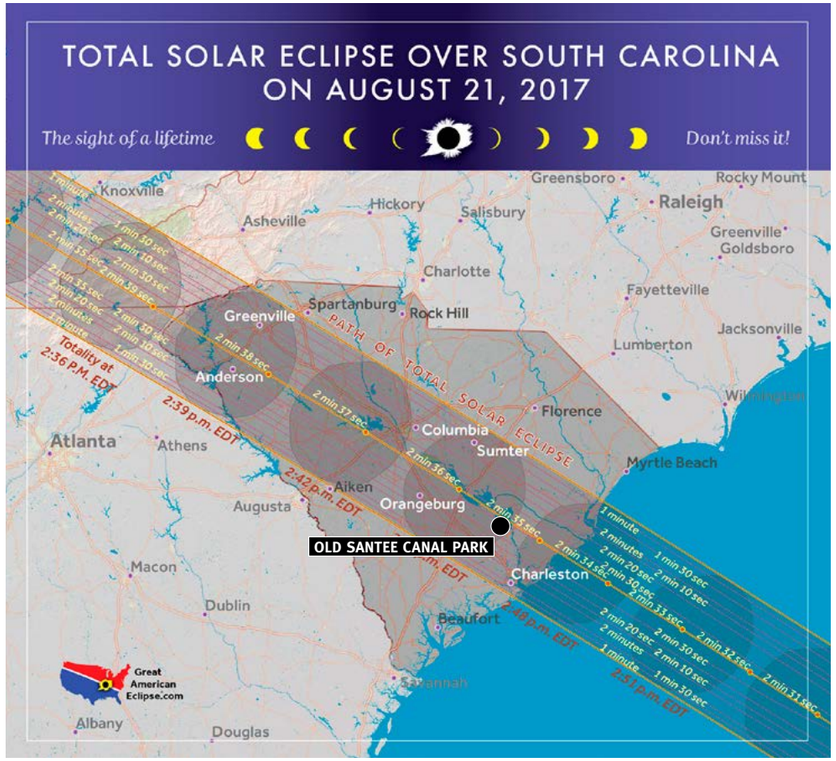
WHAT IS A **TOTAL** SOLAR ECLIPSE?



A solar eclipse occurs when the moon passes between the Earth and the sun, thereby totally or partly obscuring the image of the sun for a viewer on Earth.

A total solar eclipse occurs when the moon’s apparent diameter is larger than the sun’s, blocking all direct sunlight and turning day into darkness.

Totality occurs in a narrow path across the Earth’s surface, with a partial solar eclipse visible over a surrounding region. This time, we’re in the narrow “zone of totality.” The center line of the map on the next page shows estimated durations of totality as the sun passes over South Carolina.



The path of totality is defined as the path where observers see the moon completely cover the sun.

In South Carolina, totality will last roughly two and a half minutes.

Commonly known by its informal name, Santee Cooper Country, the state-chartered, regional-tourism organization has been constantly fielding inquiries far and wide for the big moment. And what a moment it is.

Using Santee Cooper's Old Santee Canal Park in Moncks Corner as a reference point, the eclipse is scheduled to begin at 1:16 p.m. and end at 4:09 p.m. The time of "totality" is 2:47 p.m. and will last about 2 minutes and 30 seconds, about a half-minute longer than it takes to run an average Kentucky Derby.

Old Santee Canal Park is where the west branch of the Cooper River and Tailrace Canal begins or ends, depending on which direction your boat is traveling. The big floating dock there is inviting to watercraft and Park Director Brad Sale is expecting a large crowd to visit that day.

The park is planning an eclipse-watching event with food and activities and visitors are welcome to join. The Lowcountry Stargazers organization also will attend and will provide solar telescopes for public viewing. The Stargazers can also answer your eclipse questions. The park also will have a number of solar eclipse sunglasses available on a first-come, first-served basis with paid admission to the park. The total eclipse will last 2 minutes and 34 seconds at this location. Admission to the park, located at 900 Stony Landing Road in Moncks Corner, is $3 per person.

In a normal year, the summer season everywhere hits the high-water mark in July, culminating on Independence Day. But this year is special. The eclipse is a big draw for South Carolinians and schedules are being changed around it. Although public schools, colleges and universities will have already started, most schools are taking a three-day weekend.

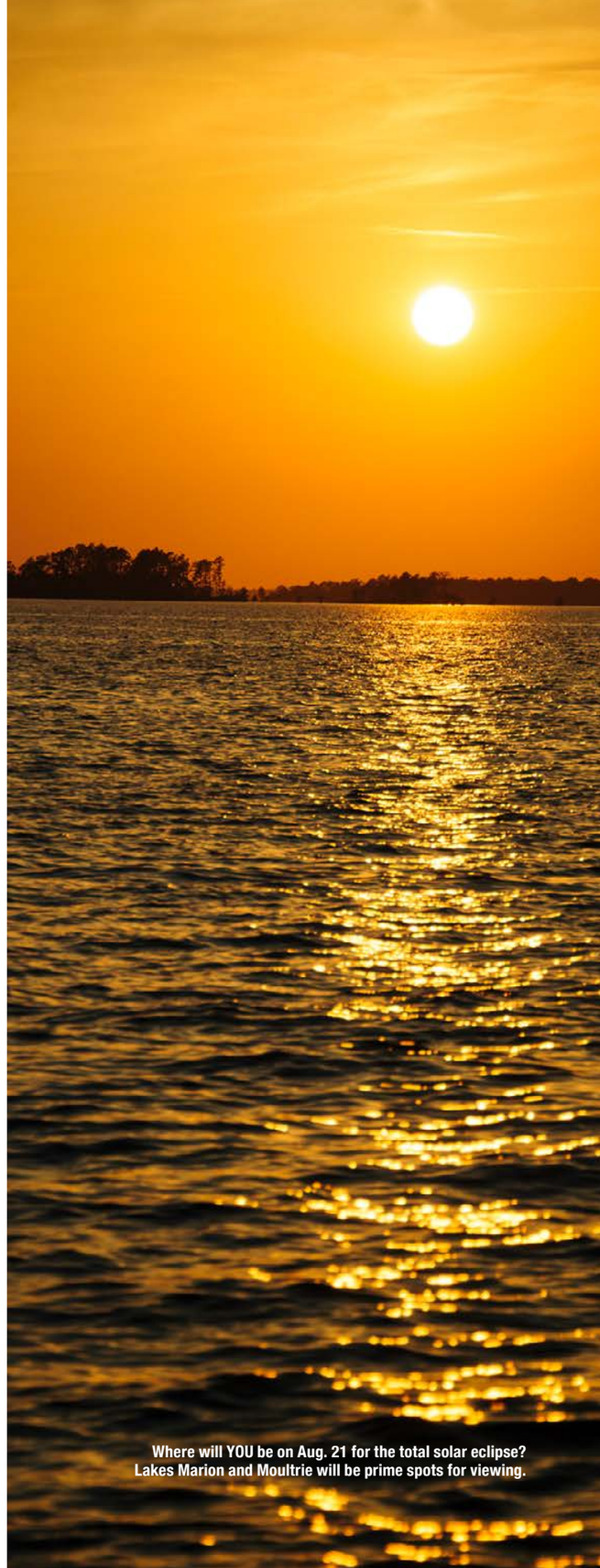
"The hotels and motels around the town of Santee are booked up for the eclipse," Shriner said. The same is true in Moncks Corner.

According to the "Santee Cooper Country 2017 Official Visitors Guide," there are 44 destinations right on or near the lakes that offer an ideal opportunity to experience the eclipse. These viewing spots include resorts, marinas, state and county parks, campgrounds, fish camps, boat landings, restaurants and golf courses.

"THEN YOU FLEW
YOUR LEAR JET UP
TO NOVA SCOTIA,
TO SEE THE
TOTAL ECLIPSE
OF THE SUN"

Lyrics from the hit song "You're So Vain"
by Carly Simon, released Dec. 2, 1972

Visit **www.santeecoopercountry.org** to see the full destination list and pick your perfect eclipse-viewing location. Some events and programs may already be sold out, but spots could become available due to cancellations. Of course, outdoor activities are "weather permitting." The visitor's guide also lists opportunities for privately owned homes on the lakes that are available for rent by real estate firms.



Where will YOU be on Aug. 21 for the total solar eclipse? Lakes Marion and Moultrie will be prime spots for viewing.

more than meets the island

The Hidden Lessons of Waties Island

BY
SUSAN MUNGO

Photography by
Paul Zoeller

WATIES ISLAND
SEA TURTLE PATROL

1,105 ACRES
OF PROPERTY
that include beach front,
marsh and
wooded land

when

you enter the gate onto Waties Island, it feels as if you have taken a step back in time. Back to a time when life was slow and quiet and untouched by the sometimes-harsh realities of progress.

In actuality, Waties is advanced in ways that do not quickly catch your eye. Through daily research, this barrier island is providing vital statistics and education that can help future generations better understand and combat the negative side effects of growth, development and progress. That data is being used to discover solutions for change that will impact the quality of life for many coastal and marine species.

One of the few undeveloped barrier islands on the South Carolina coast, Waties is a nature preserve left in trust by the Tilghman Boyce family to the Coastal Educational Foundation. It is protected by the Nature Conservancy, which guarantees it remains an undeveloped property.

“It was the wish of Anne Tilghman Boyce and her family that the property entrusted to us be left in essentially its natural form to be used for educational and research purposes. It is our job to ensure that it remains just that,” said W. Stovall Witte Jr., chief executive officer of the Coastal Educational Foundation.

Undeveloped in no way means un-useful. Waties is an island that educates.

“This property offers undeveloped ocean frontage, salt and fresh water marshes, as well as wooded areas,” said Michael Roberts, vice president for research and emerging initiatives at Coastal Carolina University (CCU). “It provides vital research opportunities for our marine science program as well as students studying biology, archeology and many other fields.”

Students and lecturers alike come to the island to learn. One of the lecturers, George Boneillo, is in marine science at CCU. During visits, Boneillo and his students regularly take water samples from the island creeks to test for phytoplankton and plastics. Phytoplankton are single-celled microorganisms at the base of the food chain. As Boneillo twisted the lid on a liter size jar of water he retrieved as a sample from under the causeway bridge, he explained how 1 liter can hold anywhere from 50 to 100 pieces of plastic microthreads.

“Mussels and oysters are filter feeders, and filter phytoplankton out of the water. The problem is that microplastics are the same size as some species of phytoplankton,” said Boneillo.

At left, Eric Rosch walks through the marsh at Waties and documents the different types and number of crabs he finds.

Below, George Boneillo examines oysters in the marsh area and explores the effects of plastic micro-threads on their reproduction.

“Therefore, the mussels and oysters are actually filtering the plastics out of the water. We are also looking at fish and finding plastics in their stomachs.”

Those plastic particles can not only clog the fish’s stomach, but can also act as a mechanism to accumulate toxins in the fish. We then eat those fish or shellfish and put those ingested or filtered plastic threads into our own bodies. The trash we create comes back to us in ways we may never realize or consider.

Walking around the island, plastics in different stages of decay are visible. Some are small and indistinguishable. Other pieces are larger, like partial bait buckets. Boneillo explained that as the plastics get exposed to the elements, they break down into smaller and smaller pieces. He said they believe many tiny pieces, or micro-threads of plastics found, come from sources like dishwashers and washing machines. He said the most they have found in 1 liter of water taken from the island is 500 microthreads.

This liter size sample collected from the water running under the causeway bridge contains plastics not visible to the human eye.

At right, top, Boneillo, graduate student Emily Asp and Roush walk through the marsh picking up what does not belong in this little slice of paradise.

At right, bottom, Rosch said the oyster bed in the distance is one of the largest in the area and those oysters help keep the surrounding water clearer and cleaner.

Looking across the marsh on Waties, areas are marked where student projects are ongoing. They often mark the research area to make sure the samples they retrieve are really comparing "apples to apples." Students observe and learn about the habits and habitats of crabs, oysters, mussels, fish and other crustaceans and marine life that all survive and even thrive on Waties.

Eric Rosch is a lecturer at CCU and is also a frequent visitor on the island. He brings students here for their marine biology labs and is a very crabby guy, studying the habits of the various crabs on the island with his students. Walking through the marsh pluff mud, Rosch pointed out different colors, sizes and other markings on sand, red and marsh crabs. Some have evenly sized claws and some do not. A particular type of male crab, for instance, can use his larger claw as protection and will even clip that claw off and fling it away to outsmart a predator.

Other marine species, like oysters, clean up the waters in which they live. "That bed of oysters," Rosch said, pointing to a large cluster of them in the creek, "is keeping the surrounding water cleaner by siphoning or sucking in water, along with the particles in the water that make it look cloudy. They can suck in as much as 1 to 2 gallons of water per hour."

Rosch went on to say that the plastic microthreads found in water samples make their way into the ecosystem and have a diminishing effect on oyster reproduction. This revelation serves as a reminder that every single piece of trash can leave a lasting impact.

Lecturers and professors understand the value of the information they gather from Waties. The CCU students who have the opportunity to conduct research also appreciate what they learn at Waites. They seek to take the information they gather and use it to make changes that impact the future. Both Rosch and Boneillo said they use the gathered information to create ideas and discover new ways to improve marine and beach health everywhere. Some students and educators even get the opportunity to present their findings and recommendations at conferences across the United States.

Emily Asp is a CCU graduate student in the field of coastal marine and wetland studies. She is spending time at Waties to specifically observe sea turtles and their habits. Her concentration is on the impact that light, even soft or ambient light, has on the sea turtles' navigation. Light can affect pregnant female turtles who return

DIGGING INTO THE PAST

From its marshes to its shoreline, Waties provides research today that can have a positive impact on our future. But don't overlook the island's wooded section that is teaching us something a little different. Carolyn Dillian, chair/associate professor of Anthropology and Geography, is leading a group of students who are doing archeological excavations in that wooded area. They are finding pottery, shell and stone tools, and learning things about how the Native Americans lived off of the plants, animals, nuts, trees and other native vegetation on the island. This is yet another way that Waties is bringing the past to light and educating today's student on ways to improve the future.

Emily Asp explained how the circle of life works as the sea turtle carcass has become a meal for crabs.

2,000 STUDENTS
have done research on the island in the last year

LIGHTS OUT!

Santee Cooper supports South Carolina United Turtle Enthusiasts (SCUTE). For more information visit www.santeecooper.com/SCUTE.

Opposite: Rosch and Barbara and Steve Demusz examine the remains of a sea turtle found in the dunes (top left). The volunteers will document this turtle's size, location and other information to aid in turtle research.

Demusz and Boneillo retrieve pieces of a damaged dock that washed up onto Waties' shore (top and middle right) courtesy of the moving tide.

to the same area where they were born to look for a dark, quiet place to nest. It can also have an effect on the newly hatched offspring that follow the brightest light, which should be the moon reflecting off the water or white crests of the ocean waves, to lead them to the ocean.

"I have seen 20 nests emerge and make their way to the ocean," Asp said. "Each nest we see can have anywhere from 100 to 130 eggs and those small hatchlings face hazards from holes in the sand, to predators and artificial light, as they try to navigate their way to the sea."

Asp calls Massachusetts home but has traveled as far as Costa Rica to do research on different types of turtles. She said the opportunity to do research at Waties is a chance of a lifetime and accessibility makes it even easier.

Barbara and Steve Demusz are neither lecturers nor students. They are two of the more than 50 volunteers who walk the beaches of Waties Island every day from May through October – as they have done for 12 years. Barbara and Steve are specifically looking for signs of sea turtle nests. They also work to make sure any nests they find are not disturbed or tampered with.

These volunteers also do their share of beach cleanup. They see firsthand the damage trash and other items left behind have on the species that inhabit the island. They have found everything from a bag of money to a full set of dentures during their daily treks.

"I found out about the opportunity to volunteer at an OLLI (Osher Lifelong Learning Institute) class at Coastal Carolina University," Barbara said. "We love the beach and have grown to love the turtles, and we enjoy the daily walk and just the pristine beauty of the beach here. We are happy to do our part to ensure it remains that way."

And speaking of the beach, it is an amazing site at Waties. The beach seems wide for a barrier island, even at low tide. Sand dunes are majestic and from the land side are tall enough to completely obscure the view of the ocean. Signs of erosion from Hurricane Matthew however are still visible even as winds whip and carry sand back to those dunes, helping to rebuild them.

Even storms teach lessons on Waties Island. After Hurricane Matthew churned up the coast in October 2016, a grant was established and Waties is being used for testing and improving new technology for a project geared to improve flood modeling.

There's a warmth and peace on the island itself. Combined with the helping hands that teach, nurture, gather information and help maintain this beautiful place, Waties is indeed a natural gem in South Carolina.

Below, Coastal Carolina University posts signs and gates to let visitors know what areas are restricted and protected.

A PUSH TO START

BERKELEY VOLVO PLANT ON TRACK FOR 2018 COMPLETION

By Mollie Gore

Key Plant Locations

1. Final Assembly
2. Paint Shop
3. Body Shop
4. Marshalling Yard
5. Santee Cooper Substation

Opposite, top: Flanked by Team South Carolina, then-Gov. Nikki Haley announced in the spring of 2015 that Volvo chose South Carolina as its new U.S. headquarters.

For decades, the view along westbound I-26 near Ridgeville didn't change much – a thick stand of trees lining thousands of acres with more trees, owned and farmed by the former MeadWestvaco paper manufacturer.

By late next year, though, the view beyond those trees in western Berkeley County will be very different: a vast and modern LEED (Leadership in Energy and Environmental Design)-certified manufacturing campus where Volvo Cars will produce its first American-made automobile. The plant's building shells are already complete.

"This is by far the biggest project we have ever done as Volvo in the United States," Volvo Cars USA President and CEO Lex Kerssemakers said in a September 2015 groundbreaking at the site. In fact, "the biggest project" is actually eight projects in one, and Volvo is on track to complete them all in time for a late 2018 production launch.

"There are so many intricate parts to this," said Stephanie Mangini, corporate communications manager for Volvo Car US Operations, which has temporary offices in Summerville, near the plant site. "Construction is one piece of it. Equipment installation is also complex and time-consuming, and that is the phase we're in now."

Volvo personnel are also establishing a purchasing organization and local and regional sourcing, building a logistics footprint, creating the information technology infrastructure,

BY THE NUMBERS

Plant site: 1,600 acres

2.3 million square feet
of building space
including body shop,
final assembly building,
paint shop and
(outside) test track.

Capacity:
up to 120,000 cars a year

Initial production:
60,000 cars a year

Investment:
$500 million initially

Employment: 1,500 people
by December 2018;
2,000 people within 10 years

Estimated Economic Impact:
$4.8 billion a year

(College of Charleston study)

2015

MAY

Volvo announces Berkeley plant

SEPTEMBER

Groundbreaking ceremony

setting up production and launching the vehicle itself.

"We're going to build the all-new S60 sedan by the end of next year," Mangini said. "That can't happen until all of these other pieces are in place, and in the right sequence."

Shortly after Volvo announced its South Carolina plant, the storied Swedish automaker delivered more exciting news: Initially, Berkeley County would be the only location manufacturing the all-new S60 sedan. When those cars begin rolling off the production line next year, Volvo will have about 1,500 employees at the plant – a significant increase from the 200 hired so far, with 2,000 employees ultimately expected on site.

When then-Gov. Nikki Haley announced in May 2015 that Volvo was coming, she credited "Team South Carolina" for pulling off the win. The team included the state Department of Commerce led by Secretary Bobby Hitt, Berkeley County Supervisor Bill Peagler, other economic development organizations including the South Carolina Power Team, the South Carolina State Ports Authority, Trident Technical College, readySC, and utilities including Edisto Electric Cooperative, Berkeley Electric Cooperative and Santee Cooper, among others.

Katarina Fjording, purchasing and manufacturing vice president for Volvo Car US Operations, said that team represents many important partners who are now helping Volvo maintain its aggressive launch schedule.

"The collaboration with these organizations has been critical," Fjording said. "We are benefiting from the professional support, and there's such an excitement around the project. There's a real sense of pride as we all work together to build something new and great for South Carolina."

In 2015, Santee Cooper helped sway Volvo to the Berkeley site with incentives including economic development grants and loans. Santee Cooper will produce the electricity that powers the plant, and Edisto Electric Cooperative will deliver that electricity through a substation that was built for the project and recently energized. The Santee Cooper Regional Water System will also provide water for the plant through Berkeley County Water & Sanitation.

2017

MIDYEAR

CONSTRUCTION EXPECTED TO CONCLUDE

LATE-YEAR

Most employees will move to site; hiring will continue

Above: In late 2015, Volvo unveiled plans for its new S90, now manufactured in Sweden and in preproduction at a plant in Daqing, China. The Berkeley County plant wil manufacture the S60 sedan.

"One of Santee Cooper's primary responsibilities is to promote economic development through reliable and low-cost power and water services," said Pamela Williams, Santee Cooper senior vice president of corporate services. "We are proud that our partnerships with Edisto Electric and Berkeley County Water & Sanitation contributed to Team South Carolina's successful bid for the Volvo plant. The jobs and other significant economic impacts associated with the plant will be life-changing, to be sure. Also important, though, is Volvo's outstanding reputation for corporate citizenship and ethical business operations."

In fact, Volvo Cars was named one of 2017's most ethical companies by the Ethisphere Institute. Volvo's commitment to vehicle safety, of course, is legendary. The carmaker also has a strong sense of environmental stewardship. At the Berkeley plant, all of its buildings will be LEED certified, for instance. With roughly 2.3 million square feet of building space under roof, that is no small feat.

Volvo Cars is building its good-neighbor reputation as well, in part by working with Berkeley County on outreach to the communities near the plant to address the concerns or needs of those residents.

"This area will go from being a place people drive by to an area people drive to," noted Bill Peagler, Berkeley County supervisor. "The introduction of a major manufacturing facility into a predominately rural area always poses challenges. We have been working very hard to manage growth in the area. We are thrilled with the prospect of thousands of high-quality jobs for our citizens, but we are striving to maintain the quality of life of those residents living in the area around the new plant."

Volvo is also working with the county, Trident Technical College and the Department of Commerce on workforce development initiatives that will help train area residents who want jobs at the plant. Volvo officials have developed a curriculum with Trident Tech, and they are holding community meetings to tell residents about the kinds of jobs that will be available, the training and skills they will require, and the programs available to provide that training.

"We still need to hire more than 1,000 people before launch, and we'd like as many of those people to be local as possible," Mangini said. "Because these jobs will require technology and automation skills, we partnered with Trident Tech to offer training to people who are interested."

At left: Volvo announced plans in 2014 to expand its Daqing plant and make it one of the most advanced car manufacturing facilities in China. That commitment to innovation and advanced technology is also taking shape at Camp Hall.

That commitment to "local" is actually one of the reasons Volvo is here. Volvo wanted to boost its market share in the U.S.

"This investment shows Volvo's commitment to build cars where we sell them and source where we build," Kerssemakers said in an April press release. "South Carolina has been an excellent partner, and we look forward to becoming an integral part of the Lowcountry community."

Peagler, Berkeley's supervisor, notes, "Volvo is a game-changer. The economic impact that the plant will bring to Berkeley County is just the first part of what we anticipate will be a major new development engine for the entire region."

Santee Cooper is ready to help with that additional development Peagler anticipates: the utility bought the 6,800-acre MeadWestvaco Camp Hall tract in 2015 and sold Berkeley County the land for the Volvo site. Santee Cooper owns the remaining acreage and is finalizing plans to set aside 2,000 of those acres for conservation and wetlands mitigation and restoration. Another 1,400 acres, roughly, would be available for additional industry or commerce.

"This project represents a tremendous opportunity for Santee Cooper to help improve the state's economy and the quality of life for South Carolinians, all while benefiting our existing customers," Williams said. "It will be transformative."

2018

LATE-YEAR

1,500 employees onsite

LATE-YEAR

Anticipated completion of Interstate 26 exit ramp to site

2019

Santee Cooper wins prestigious APPA awards and earns Reliable Public Power Provider designation

Santee Cooper was presented with an award for outstanding safety, a Reliable Public Power Provider designation, and first and second places overall in the national lineworkers rodeo.

The awards were announced May 8 at the American Public Power Association's (APPA) national Lineworkers Rodeo and at the association's annual Engineering & Operations Technical Conference, both held in San Antonio, Texas.

SAFETY AWARD OF EXCELLENCE

Santee Cooper has earned a first place APPA annual Safety Award of Excellence for safe operating practices in 2016. The award is in the category for large utilities, with 1,000,000 to 3,999,999 worker-hours of annual worker exposure.

"We are extremely pleased and proud to have earned APPA's Safety Award for Excellence," said Ken Lott, Santee Cooper's interim vice president of human resource management. "Santee Cooper considers safety for our employees and customers of paramount importance. This award is a testament to the dedication and focus our employees have and continue to have in creating and maintaining a safe working environment."

Lott says that in 2016 Santee Cooper recorded 29 safety incidents, the fewest of any year since records were kept. Santee Cooper has a workforce of 1,759 employees.

"Our safety record in 2016 was likely our best ever," says Lott. "We have been steadily lowering the annual number of safety incidents over the last 30 years. We continue to see positive results in 2017. For example, in March and April we went 48 consecutive days without a safety incident."

Santee Cooper employees accepted the annual Safety Award of Excellence at APPA's annual Engineering & Operations Technical Conference on May 8.

Pictured are Chair of APPA Safety Committee Rick Aguilar, Santee Cooper's Manager of Occupational Safety Jason Fugate, Manager of Distribution Operations Neil James, Vice President of Retail Services Mike Poston and Manager of Berkeley Operations Trey McCants, and APPA Senior Vice President of Engineering Services Michael Hyland.

LINEWORKERS SWEEP RODEO AWARDS

Santee Cooper's lineworker teams swept first and second place on May 6 at the national APPA Lineworkers Rodeo. Out of 73 competing teams, the Santee Cooper transmission team won first place overall and the Santee Cooper distribution team won second.

The transmission team includes Jay Ayers, Johnny Brinson and Kevin Rhode. Drew Jordan, Joe Sawyer and Chad Williams make up the distribution team. Neither one of the Santee Cooper teams lost any points during event competition, meaning they met every safety standard.

From left: The Santee Cooper Journeyman team of Johnny Brinson, Jay Ayers and Kevin Rhode took first place at the national lineworkers rodeo. Drew Jordan, Chad Williams and Joe Sawyer earned second place.

In addition to the overall awards, Rhode, Brinson and Ayers placed first in the cutout replacement, first in the OCR replacement and second in the phase tie-in events. Jordan, Sawyer and Williams placed second in the crossarm replacement and third in the OCR replacement events.

Also, Santee Cooper Distribution Apprentice James "Sport" Rabon placed third in the cutout fuse replacement event, out of more than 150 apprentices in that class.

RELIABLE PUBLIC POWER PROVIDER DESIGNATION

Santee Cooper earned the Reliable Public Power Provider (RP3) Diamond Level designation from APPA for providing customers with the highest degree of reliable and safe electric service. This is the fifth time Santee Cooper earned the RP3 designation.

"We work hard to provide safe, reliable, low-cost and environmentally responsible power and water to our customers," said Mike Poston, vice president of retail operations. "The RP3 designation represents our employees' efforts, and we are honored to receive the Diamond level again."

The RP3 designation, which lasts for three years, recognizes public power utilities that demonstrate proficiency in four key disciplines: reliability, safety, workforce development and system improvement.

Criteria include sound business practices and a utility-wide commitment to safe and reliable delivery of electricity. This is the 12th year that RP3 recognition has been offered. Santee Cooper joins more than 220 public power utilities nationwide that hold the RP3 designation.

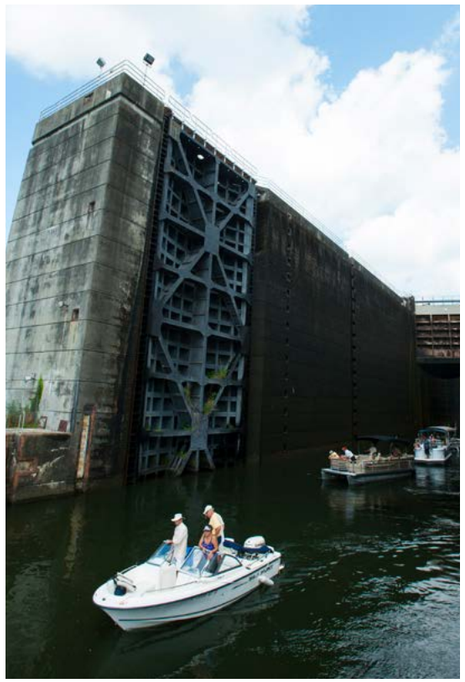
“Utilities that have earned an RP3 designation demonstrate public power’s emphasis on achieving leading practices and providing a high level of service to communities,” said David Lynch, chair of APPA’s RP3 review panel and assistant director of utility operations at Marquette Board of Light and Power in Marquette, Mich. “We are proud to welcome all utilities earning this recognition for the first time and to those renewing their designations.”

Located in Washington, D.C., APPA is the voice of not-for-profit, state, municipal, regional and district utilities that power 49 million people in 2,000 towns and cities nationwide. The association advocates and advises on electricity policy, technology, trends, training and operations.

Summer operating hours for Pinopolis Lock

The summer operating hours for the Pinopolis Lock at the Jefferies Hydroelectric Station on Lake Moultrie are 9 a.m. (or 30 minutes after sunrise, whichever is later) to 7:30 p.m. (or 30 minutes before sunset, whichever is earlier). Digital signage at the lock will display the current operating status.

Please remember that the lock does not operate during thunderstorms or rough-water conditions. Occasionally, it is necessary to take the lock out of service for periodic maintenance or repair. If you will have a large party of boats, you are encouraged to call in advance. Please call **843-899-LOCK (5625)** with any questions.



Mosquito spraying around lakes Marion and Moultrie

The Santee Cooper Vector Management program is conducting seasonal mosquito spraying around lakes Marion and Moultrie. Santee Cooper will be spraying at various times during prime mosquito season.

> **Berkeley County**: Dubois Peninsula, Live Oak, General Moultrie (sections I and II), Dubois Extension, Bonneau Park, Pinopolis, Halls, Thornley Forest (sections I and II), Thornley Extension, Locklear Landing, Overton, Diversion Canal, Black Oak, Cross, Diversion Canal, S&S Campground, Johnston’s Landing, Black’s Camp, Big Oak Landing & Campground, and Angel’s Landing Campground & Marina. Public boat landings are also served.

> **Calhoun County**: Poplar Creek Landing, Low Falls, High Hills, Calhoun and Washington Point. Public boat landings are also served.

> **Clarendon County**: Church Branch, Davis, W.B. Davis, Clark, Gin Pond, Wyboo, Frierson, White Oak (sections I, II, III), Rowland, Taw Caw, West Wyboo, Prince (sections I, II,III), Francis Marion, Goat Island, Cantey Bay, Alex Harvin Landing, Scarborough’s Landing, Camp Bob Cooper, Polly’s Landing, Cooper’s Landing, Goat Island Resort, Taw Caw Landing, Taw Caw Park, Taw Caw Campground, John C. Land Landing and Elliott’s Landing.

> **Orangeburg County**: St. Julien, St. Julien Extension (sections I and II), Fountain, Fountain Lake, Belvedere, Belvedere (section II and III), Sinkler, Eutaw Spings, Ferguson’s Landing, Bluff, Bluff View, Red Bank (sections I and II), Mill Creek, Mill Creek Campground and Santee State Park. Public boat landings are also served.

> **Sumter County**: Pack’s Landing and Sparkleberry Landing.

Santee Cooper typically sprays around 50,000 acres annually by truck for adult mosquito control and 300 acres for larval control in communities surrounding the Santee Cooper Lakes. The chemicals used in spraying processes are EPA approved and employees who spray are licensed by the Clemson University Department of Pesticide Regulation.

The prime season for mosquitoes begins as early as April and typically ends in November. About 50 mosquito species inhabit the area surrounding the lakes. Mosquitoes breed in standing water and the Santee Cooper Vector Management Program urges residents to decrease mosquito activity by eliminating potential breeding sites. Any container that holds water should be emptied or removed.

The Santee Cooper Mosquito Control website at **www.santeecooper.com/mosquitocontrol** provides a general overview of Santee Cooper’s mosquito-control services. Requests for service may be submitted via this website. Scheduled spray runs are also posted.

santee cooper®

POWERING
SOUTH CAROLINA

Working with the state's electric cooperatives, Santee Cooper is an important resource for industries relocating and expanding here. Since 1988, we have helped bring nearly $14 billion in industrial investment and more than 73,000 new jobs to our state.

That's a powerful partnership.

www.santeecooper.com